



U.S. DEPARTMENT OF  
**ENERGY**

**Nuclear Energy**

# **Office of Gas Cooled Reactor Technologies Office of Advanced Reactor Concepts**

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# Mission

**NGNP:** Demonstrate HTGR technology to produce electricity & high temperature process heat

**ARC:** Perform research to develop and refine future reactor concepts that could dramatically improve performance

**SMR:** Conduct RD&D activities that support licensing and deployment of advanced SMR designs

**LINKAGE:** R&D Roadmap Objective 2 to develop improvements in the affordability of new reactors to enable nuclear energy to help meet the Administration's energy security and climate change goals



# Funding

(Dollars in Thousands)

FY 2011	FY 2012 Enacted	FY 2013 Request
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**Small Modular Reactor Advanced Concepts R&D**

**3,105 28,001 18,479**

**Next Generation Nuclear Plant Demo Project**

**94,025 40,000 21,157**

Light Water Reactor Sustainability

38,818 25,000 21,661

**Advanced Reactor Concepts**

**28,758 21,870 12,377**

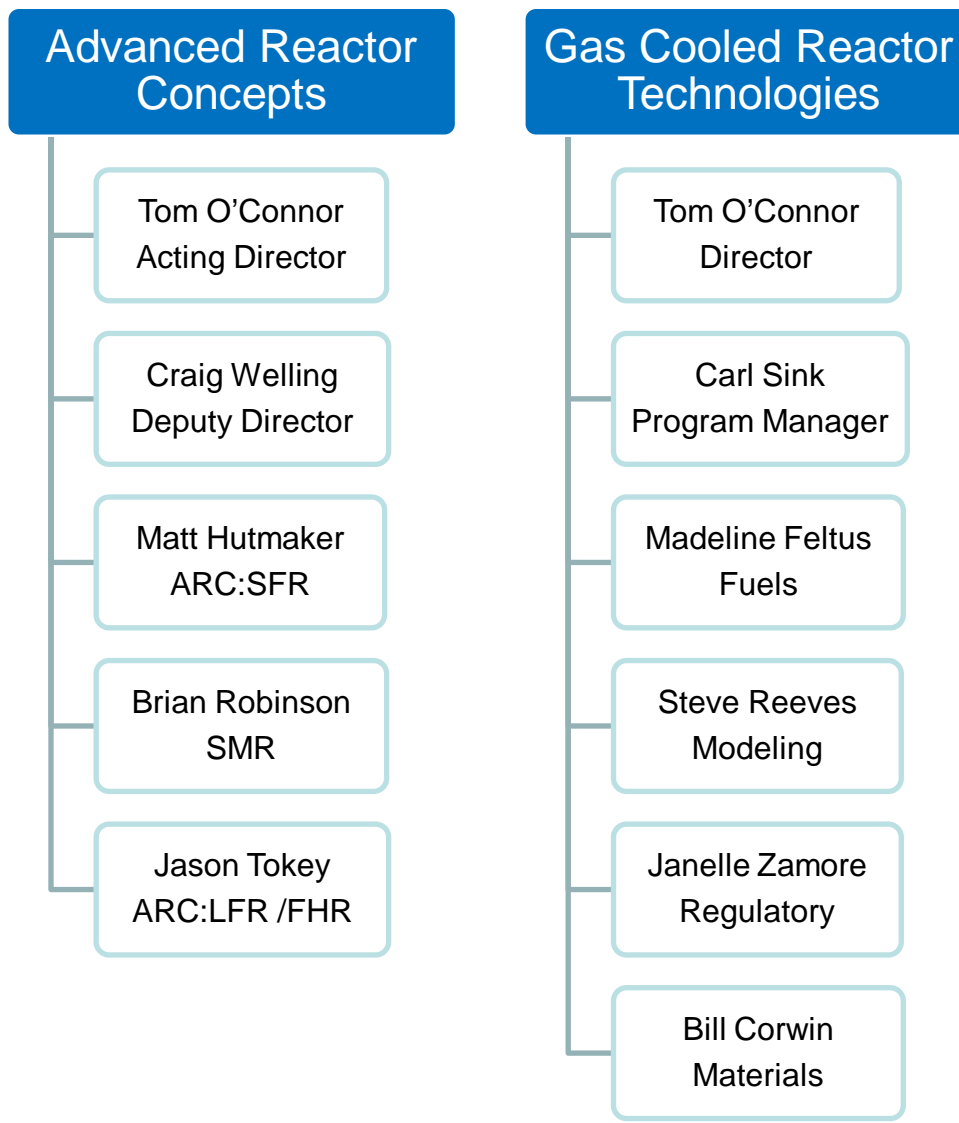
SBIR/STTR (non-add)

- [3,389] [2,247]

**Total 164,706 114,871 73,674**



# Staffing





# Research Areas

## ■ Reactors

- Sodium cooled fast reactor
- Gas cooled reactors
- Lead cooled fast reactors
- Liquid salt reactors

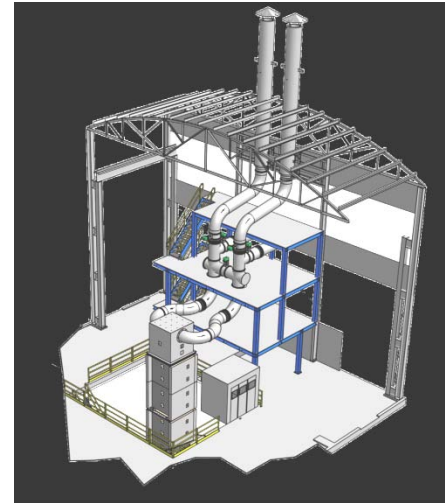
## ■ Components

- Heat exchangers
- Energy conversion

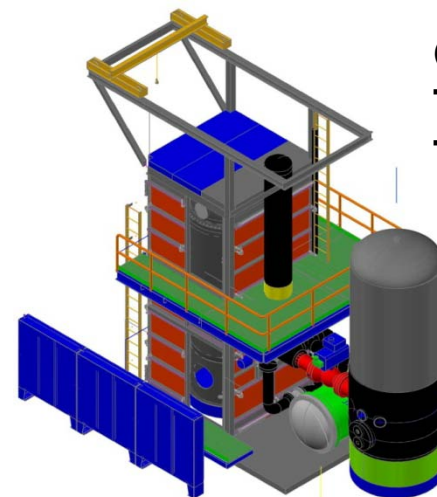
## ■ Other

- Fuels
- Licensing
- Materials
- I&C
- Modeling/Experimental Validation

## ■ University Support via NEUP



**ANL: Natural  
Convection  
Shutdown Heat  
Removal Test  
Facility**



**OSU: High  
Temperature  
Test Facility**



# International Collaborations

## ■ Generation IV International Forum

- Policy Group
- Technical Experts
- Sodium Cooled Fast Reactor System Arrangement
- Very High Temperature Gas Cooled Reactor System Arrangement
- Economics/Safety/Proliferation Resistance & Physical Protection.

## ■ Bilateral/Trilateral Collaborations

- *Japan*
- *Republic of Korea*
- *France*
- *Peoples Republic of China*
- *Russian Federation*
- *European Union*
- *others*